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Development and Validation of a Test to Measure Aggression Potential

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DEVELOPMENT AND VALIDATION OF A TEST TO MEASURE AGGRESSION POTENTIAL

by

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CHAPTER I

REVIEW OF THE LITERATURE

In the past decade the increased public concern about national and international violence has resulted in many theories and studies about the cause and control of violence. The eventual goal of this study was to develop a strategy for the management of aggression and to compare various strategies for the control of aggression.

A strategy for controlling aggression should be grounded in a theoretical perspective which itself has been anchored by many attempts at verification. Therefore, the present study has been anchored within the theoretical perspective of Leonard Berkowitz (1962, 1965).

The specific purpose of this study was to develop a test within the theoretical perspective of Berkowitz that will differentiate people and/or serve as a dependent variable in future research to assess effects of strategies for the management of aggression.

Berkowitz (1962, 1965) postulated that there are tro pre-conditions for any aggressive act: a condition of "readiness" to aggress and the presence of an eliciting cue in the environment. With respect to the former, two different conditions can produce a state of readiness, arousal of anger or the existence of an aggressive habit. The dynamics of anger and aggressive habit are very different. The present study was concerned with expressive aggression which is hypothesized to be triggered by the presence of an eliciting cue

(e.g., a gun) only for persons who are in a state of readiness due solely to aroused anger.

Berkowitz's work stems from the work of Dollard, Doob, Miller, Mowrer, and Sears (1939). They defined aggression as a response which has as its goal the injury of a person. Berkowitz (1962) also used this definition.

Since the anger state has been postulated by Berkowitz to be the first of a two-part sequence leading to aggression, the tendency to aggress should be predictable (and ultimately controllable) by identifying those conditions under which an individual reaches the necessary state of anger. In accord with Berkowitz's emphasis on cues, Schachter's (1970) theory of emotions has been adopted. He hypothesized that, given a state of physiological arousal for which a person has no explanation, he will label the state in terms of the cognitions available to him. Schachter stated that the external circumstances surrounding the person are very important in determining the label that will be attached to the physiological arousal. He further stated that a person's past experience is also relevant in determining his label for the state of arousal.

Cognitive theories of feeling and emotion describe the relationship between the external circumstances and the person's past experience. The same stimulus situation does not always produce the same emotional response, except for very intense and unambiguous stimulus situations. Therefore, the labeling of the arousal state as anger is dependent on past experience or learning, and there are likely to be individual differences in the degree to which arousal is labeled

as anger. Within this theoretical perspective, a test measuring anger must obtain two pieces of information: the degree of a person's arousal and the extent to which that arousal is identified as anger.

Schachter's emphasis has been on the situational determinants of the labeling process. He has presented subjects with very unambiguous stimulus situations. He demonstrated that persons who experience arousal without an adequate explanation for that arousal, search the environment for clues to explain their arousal. Further research by Schachter and others (Goldstein, Fink, & Mettee, 1972; Valins, 1966) indicated that when a person is aroused but doesn't know why, strong environmental cues can determine the label for that arousal. However, most of these studies have not been interested in individual differences in labeling arousal as anger.

The preceding studies suggest that in order to determine individual differences in perception or labeling of arousal, strong environmental cues should not be used. Individual determinants of emotion are most likely to be used when situational forces are weak. There are two possible ways of minimizing situational influences. The situation could be ambiguous or it could contain a multiplicity of situational cues. In the latter case, an individual could select or emphasize one cue over the others. For purposes of this study, it was assumed that situations contain a multiplicity of cues.

There have been many tests that have attempted to measure aggression and hostility. The literature contains little verification for the convergent validity of any of these tests. None of the tests are applicable to the theoretical perspective used in this study.

Also, no tests have been found based on the work of Schachter. The present study was an attempt to develop a test that would measure an individual's aggression potential. Within the theoretical perspective delineated above, this means that what was to be measured was an individual's degree of arousal and the degree to which that arousal was labeled anger relative to situations that contain a multiplicity of cues to negative affective states.

CHAPTER II

PROCEDURE

Test Construction. It was decided that the questionnaire should be composed of items that describe actual stimulus situations. The items were intended to be of comparable stimulus intensity and contain cues for several emotions. The cues were chosen so that no one cue would overwhelmingly determine a particular emotion for all individuals. It was planned that the respondent would be instructed to read the situation and indicate how he would feel in that particular situation by indicating the degree of intensity that he would feel relative to each of five emotions.

In order to generate items, five books on aggression were read with the intent of finding a list of potential causes of the negative emotional or affective component of aggression. Most of the causes of anger were obtained from Fawcett (1971) and Singer (1971). The list included: ideological differences between groups (2)[1], rude and unpleasant persons (3), threat to satisfaction of basic needs (5, 6), arbitrariness of a frustrator's behavior (7), maliciousness of frustrator (8, 12), frustrations in efforts to gain status, security, and/or reputation (9, 10), unreasonable demands (13), inability to retaliate (14), damage to personal property (15), threat of attack (16), insults (17), despair that society will protect a particular group (18). The ideas for four of the items (6, 10, 12, 15) came from

Rosenweig, Clarke, Garfield, and Lehndorff (1946), based on their short, written descriptions of the Picture-Frustration Test.

The items were written to include possible cues not only for anger but also for the other emotions that were included (to be discussed below). Admittedly, not as much attention was given to the development of cues for these other emotions.

Two additional dimensions were also included in the construction of the items. Two-thirds of the items were written such that the person reading the questionnaire is the victim of the anger-instigating act. For the other one-third of the items, someone else is the victim. This other person is either a parent, a nonparental authority figure, a peer, a stranger, a sibling, or a spouse or intimate opposite-sexed friend (see Table 1).

In all of the items, the role of the anger-instigator also varies. The instigator is either a parent, a nonparental authority figure, a peer, a stranger, a sibling, or a spouse or intimate opposite-sexed friend. Table 1 gives the role of the perpetrator of the aggressive act for the final draft of the questionnaire.

The choice of emotions which were used as response variables was based on Plutchik (1968). He postulated eight basic emotions: anger, joy, acceptance, surprise, fear, sadness, disgust, and anticipation. Four of these emotions were chosen: anger, fear, sadness, surprise; and annoyance was substituted for disgust. Plutchik also gave labels for these emotions at a higher level of emotional intensity. The corresponding terms reflecting a high level of intensity are rage, terror, grief, and shock. For the emotion

Table 1

Classification of Items

X	Self is Victim	Other is Victim	
	Perpetrator is X	Victim is X	Perpetrator is X
Parent	2, 13	9	5
Authority Figure	7, 14	18	9
Peer	3, 10	17	18
Stranger	4, 16	12	12
Sibling	8, 11	5	15
Spouse	1, 6	15	17

annoyance, disgust was chosen as the word at a comparable level of intensity.

The respondent was instructed to circle one number along a seven point scale. The seven numbers were described by four words or phrases. The same format was used for each item (see Appendix A for the whole questionnaire).

Pilot Testing. The original draft of a twenty-item questionnaire was used for pilot testing. Approximately twenty friends and relatives of the researcher answered the questionnaire. They were asked about the clarity of the directions and the items, the unidimensionality of each emotion and its high intensity description, and the relative intensity of the emotion and of the high intensity descriptions.

The directions were found to be clear, and the items that weren't clear were either changed or discarded. Several respondents commented that they could make no distinction between anger and annoyance. Several people stated that disgust and annoyance weren't on the same dimension and that neither were of the same intensity as the terms used for the comparable level of intensity on the other dimensions. For these reasons, the annoyance-disgust dimension was replaced by another Plutchik (1968) dimension, disgust and loathing.

The individual's total for each emotion and the total for four emotions, excluding anger, were obtained and these totals were intercorrelated. For the pilot, subjects' anger correlated between .43 and .55 with the other emotions. The correlation between anger and the total other score (total of the other four emotions) was .64. These high correlations indicated that the emotions were not as

independent as had been hoped, but it was decided to give the questionnaire to a broader range of respondents.

Other Measures. Demographical data and scores from two additional tests were also obtained (see Appendix B). For some of this additional data, specific predictions were made. Aggression is much more common and acceptable for people in lower socioeconomic groups. It was hypothesized that high SES individuals would not label their arousal as anger as often as low SES individuals. Men are known to rely on physical force more often than women. And men are generally considered to have a smaller range of usable emotions than women. Thus, it was hypothesized that men would more often label their arousal as anger. More muscular, taller, and/or heavier people are more likely to be reinforced for assertive and aggressive acts than less muscular, shorter, and/or lighter people so that the former groups should be more likely to label their arousal as anger. For the purpose of testing this prediction, the individual's actual height and weight were obtained. Each person was also asked to indicate if he was more or less muscular than the average person of his sex on the day on which he answered the questionnaire and also at age 13. Each person was also asked to give his impression of himself for height and weight. Age and birth order were also thought to be possible differentiating variables, but no specific predictions were made on these dimensions.

The Taylor Manifest Anxiety Scale (MAS) was also given. If necessary it was to be used as an independent measure of arousal. Persons scoring high on all the scales, especially the anger scale,

were expected to have the highest MAS score and persons with the lowest scores on all the scales were expected to have the lowest MAS score. Byrne's Repression-Sensitization Scale (RS) was also given as a possible means of subdividing individuals into two groups and a separate analysis of the data made on each group. Also, since there is generally a high correlation between MAS and RS, it was expected that the MAS predictions would also be true for RS scores.

Selection of Respondents and Administration. The final questionnaire respondent sample was obtained from two different sources. One of the groups was composed of 82 students who answered the questionnaire to fulfill research credit requirements for an introductory psychology course at Loyola University of Chicago. Seventy of these students answered the questionnaire on March 1, 1973 and ten students on March 7, 1973.[2] The administrator read the following instructions to all of the students at the same time in a classroom, "In front of you are two questionnaires that I am trying to evaluate. Together they take about 45 minutes to answer. On the first questionnaire there are some directions. After you have read these instructions, raise your hand so that I know when you have finished."

The directions on the Life Events questionnaire stated,

> This questionnaire is concerned with your reactions to different situations. There are no right or wrong answers.
>
> For each of the items below, you are to do your best to imagine yourself as the person involved in the situation and then to describe what your potential reaction would be in terms of the different emotional responses. Specifically, you are to circle one of the numbers which indicate the degree of intensity for each of the emotions under each item. Therefore, there should be five

circles under each item. Take your time and rate each emotion independently.

When they had finished reading these directions, the following directions were read to them,

> Read each item carefully and take a short amount of time to place yourself in the situation described. Give yourself some time to 'feel' the situation.
>
> In some of the situations, you are asked to take the role of a person of the opposite sex. For example, if you are a woman and this situation concerns a man, try to feel how a man would feel in that situation and indicate the emotion(s) that you would feel. For some of the situations, you may have to put yourself into other roles which you are not accustomed to. Although it may be difficult, try to imagine yourself in these roles.

The administrator also stated,

> If you have any questions, raise your hand and I will come to you and answer them. I thank you for helping me do this project. I sincerely appreciate your cooperation. When you have finished with the material, you may leave. Please bring the materials to me and I will give you a more detailed description of my project. Thank you again.

The second group of respondents was composed primarily of adults who were active members in one of three church groups in the Indianapolis area. Sixty people in this group cooperated. Roughly 80 percent of the respondents were Catholic and 20 percent were Protestant.

For one of the adult groups, the questionnaire was introduced by the author at a church social function. He informed the group about his affiliation with Loyola University of Chicago, the time requirement for the questionnaire, and the general nature of the project. These remarks were basically the same as those introductory and concluding remarks given to the students. He also told them that he especially needed adults to answer the questionnaire so that it

could be adequately evaluated. In return for their cooperation he offered to present a talk on one of several psychology-related topics. He informed them that he would send them a one-page statement describing the results of the study. If they were interested in answering the questionnaire, they were instructed to pick up a stamped, addressed envelope when they left the building. Inside the envelope there were the two questionnaires and a set of instructions (see Appendix C). Approximately 40 out of the 100 people in attendance took the packet. Out of these 40 approximately 22 mailed the completed material back to the researcher.

For the second adult group the questionnaire was introduced by the pastor of a Catholic Church at the end of a Sunday morning mass. The researcher handed out the same packet to interested parishioners at a gathering after the religious service. Approximately 26 out of the 35 people who took the material mailed it back to the researcher.

The questionnaires were introduced to the third group, Protestant Sunday-school teachers, by a fellow teacher, a friend of the researcher. Approximately 12 of the 20 teachers who received the material completed it and returned it to the researcher.

CHAPTER III

RESULTS

Each of the 90 responses of the test (18 items, five ratings on each) was correlated with every other response, with the sum of the ratings for each emotion, and with five other variables (MAS, RS, age, sex, and socioeconomic status (SES)). This yielded a 100 x 100 matrix of intercorrelations. These correlations were used for measures of internal consistency and construct validity and for deciding the best method for classifying respondents into separate groups of response types.

Internal Consistency. Three measures of internal consistency were obtained for the anger measure. Table 2 presents the correlations between each anger item and the total anger score. There was no item whose correlation was so low that it should be dropped. This indicated that there was no item that measured something significantly different than does the test as a whole. The intercorrelations between anger responses across items were also indicative of internal consistency. The average interitem correlation was .23. Also, the coefficient alpha for the anger scale was .84. This high coefficient indicated that the items were satisfactorily homogeneous and that the variance in the anger scores was due primarily to consistent individual differences.

Construct Validity. The initial step of construct validation

Table 2

Correlations between the Score on Each Item and the Total Anger Score

Item #	Correlation	Item #	Correlation
1	.31	10	.61
2	.48	11	.35
3	.61	12	.56
4	.52	13	.47
5	.46	14	.56
6	.52	15	.63
7	.48	16	.61
8	.44	17	.62
9	.54	18	.60

was accomplished in the pilot testing by the elimination of irrelevant items and the elimination of annoyance as an emotion.

The main contribution of this study to construct validation of this questionnaire, and more specifically the anger scale, was the use of convergent and divergent measures within the test itself (see Campbell & Fiske, 1959). The correlations between the anger scores for different items were expected to be greater than the correlation between anger in one item and any one of the other emotions in another item. Ideally, the interitem anger correlations were also expected to be greater than the correlations between anger and any other emotion within the same item. However, in this latter case, most often the correlations were higher for the same item than for the same trait. Table 3 gives the average of the correlations for the variables as indicated. The average correlation between anger for one item and anger for another item was .23. This seems to be significantly greater than the average correlation between anger in one item and any other emotion in a different item (.14). However, as is the case with many tests, the average correlation between anger and any other emotion within the same item (.44) was much greater than the average interitem anger correlation. This indicated that the contribution to the variance of different situations was greater than the contribution of the different emotions.

Also supportive of construct validity of the anger scale are the differences obtained between various groups. Five variables correlated high with the total anger score (TAN) (see Table 4). However, there was no simple linear correlation between the physical

Table 3

Average of Correlations for a Convergent-Divergent Matrix within the Life Events Questionnaire

Average Correlations between Anger and ...	Classification of Correlations		
	Homotrait Heteroitem (Same Trait Different Item)	Heterotrait Homoitem (Different Traits Same Item)	Heterotrait Heteroitem (Different Traits Different Items)
Anger	.23 (N=153)*		
Fear		.22 (N=18)	.12 (N=306)
Sadness		.37 (N=18)	.14 (N=306)
Disgust		.66 (N=18)	.18 (N=306)
Surprise		.48 (N=18)	.14 (N=306)
Averages		.44	.14

*Numbers in parentheses are the number of correlations averaged.

Table 4

Correlation Matrix for Five Variables and TAN

Variables	Correlations				
	Age	SES	RS	FSTB	TAN
Sex	-.069	.175*	-.077	.155	-.110
Age		.243**	-.335**	.047	-.221**
SES			-.170*	.205*	-.122
RS				-.252**	.240**
FSTB					-.317**

*p < .05

**p < .01

variables, height, weight, and muscularity, and the anger scale (see Table 8).

A stepwise multiple regression was done with these five variables. In this analysis these variables were used in an equation to predict the total anger score. The correlation of these predicted values with the actual anger scores was .40 ($p < .01$) ($F = 5.129$, $df = 5/136$). First-born and age were significant variables in the equation.[3]

Classification into Groups. According to Schachter (1971) the two-process theory of emotion, arousal and labelling, would enable respondents to be classified into one of four groups based on two dimensions: high-low anger arousal and high-low other (emotion) arousal. Ideally, these would be two independent processes so that there should be an equal number of persons in all four groups. Also people in the various groups should differ on other dimensions. In other words, Schachter's theory predicts that this classification will validly sort people into different response categories.

An initial classification of the respondents in this study was achieved by dividing them into high-low (relative to the median) anger score and high-low total other arousal (total score for the other four emotions). However, the pilot testing indicated that these were not independent dimensions ($r = .64$). Also, the high correlations between the total scores for each of the five emotions indicated this was not a good basis for classification (see Table 5). The especially high correlation ($r = .77$) between anger and disgust indicated that respondents viewed these emotions as essentially the same. As

Table 5

Correlations for Totals of Each Emotion

Emotions	Correlations				
	Anger	Fear	Sadness	Disgust	Surprise
Anger		.45	.54	.77	.61
Fear			.65	.50	.47
Sadness				.56	.60
Disgust					.62

Table 6 indicates, the patterns of correlations between these emotions and other subject characteristics were essentially the same.

It was then hypothesized that these high correlations were due to individual differences in using certain parts of the scale. For example, a person could have a much greater tendency to label his arousal as anger but use the low end of the scale. In the above classification he would have been labelled low anger and low other arousal. To overcome this problem, deviation scores were obtained. For each individual the average score for all five emotions was subtracted from each emotion's total. However, it was soon realized that there is a built in negative correlation among the deviation scores for the various emotions. In effect, this procedure reduced the classification to two groups based on one dimension.

Since fear and sadness correlated lower with anger than the other emotions, it was decided that they would be used to separate people into differential arousal groups. A person's total anger score could be either above or below the median anger score (74.90) and his total fear plus total sadness score could be above or below the median fear score (42.83) plus the median sadness score (57.83). Since there is a positive correlation between anger and these emotions, it was to be expected that there would be more individuals classified in the high-high (HH) and low-low (LL) cells than in the low-high (LH) and high-low (HL) cells. The obtained distribution is presented in Table 7.

There was a problem with this classification. The off-diagonal cells (the HL and LH groups) contained more error of classification. It was difficult to determine to what extent people classified in these

Table 6

Correlations for Test Data and Demographic Data

and the Total Scores for the Emotions

Total Scores for...	Correlations				
	Test Data		Demographic Data		
	MAS	RS	Sex	Age	SES
Anger	.23**	.26**	-.12	-.22**	-.14
Fear	.20*	.14	.01	-.07	-.16
Sadness	.10	.07	-.13	.02	-.16
Disgust	.21*	.22*	-.02	-.18*	-.11
Surprise	.06	.01	-.14	.02	-.02

* $p < .05$
** $p < .01$

Table 7

Classification of Respondents and Composition of Subgroups according to Type of Respondent

Classification on Fear and Sadness Dim.	Number of Respondents		
	High Anger	Low Anger	Total
High	N = 52 (32)* (20)**	N = 21 (9) (12)	73
Low	N = 21 (18) (3)	N = 48 (23) (25)	69
Total	73	69	142

* The first number in parenthesis in each cell is the number of students at Loyola that make up the total number of respondents in that cell.

** The second number in parenthesis in each cell is the number of adults in church groups that make up the total number of respondents in that cell.

cells were correctly classified. The reliability of the three scales was very important in determining how much error was possible. The internal consistency of the anger scale was .84, of the fear scale .86, and of the sadness scale .85. These were acceptably high values relative to the psychometric quality of the test, but they were low enough to allow for fairly high regression of extreme scores. For further exploration of the reliability of the classification system, three factors were investigated.

First, if the people in the four groups differ from each other on exogenous variables, this would add some validity to the classification and indicate that the respondents were reliably classified. In regards to demographic variables and test data, there was no clear cut difference between the groups (see Table 8). Several variables, first-born, RS, sex, SES, and age, correlated with the anger scale (see Table 5), and most of the differences between the groups were explained by this correlation. The similarity among the groups on the demographic variables and test data did not lend support to the validity of the classification.

Since the fear-sadness dimension was hypothesized to measure arousal, it was expected that MAS would correlate with the total fear plus total sadness score (TFeSa). The correlation ($r = .16$) obtained across all respondents was positive, but it did not reach statistical significance. If the classification system was reliable, the correlation between MAS and TFeSa for the HH and LL groups combined would be expected to be the same as the correlation between MAS and TFeSa for the combined HL and LH groups. However, if the HL and LH

Table 8

Demographic Variables and Test Data by Groups

Variable	Means of Variables			
	HH	HL	LH	LL
Sex M = 2 F = 1	1.404	1.52	1.38	1.56
Age	26.14	22.00	30.86	29.75
SES 7 = high 1 = low	4.46	4.42	4.58	4.87
RS	43.98	46.00	39.71	38.38
MAS	17.18	16.05	14.90	15.08
Height (Male)	5'9.57"	5'10.45"	5'11.25"	5'10.68"
Height (Female)	5'4.89"	5'5.00"	5'5.20"	5'5.32"
Weight (Male) (lbs.)	163	164	179	174
Weight (Fem.) (lbs.)	130	132	147	129
# of siblings	4.62	4.29	3.80	4.08
Rank in family	2.38	2.62	2.00	2.19
Ave. # of 1st Borns	.21	.24	.43	.50
Muscular 1 = More 0 = Less (Age 13)	.41	.53	.60	.31
Weight-13 "	.41	.47	.52	.38
Height-13 "	.51	.53	.53	.64
Muscular (Today) "	.51	.67	.67	.52
Weight-To. "	.38	.63	.42	.40
Height-To. "	.56	.59	.45	.64

groups contained scores with more error, then the correlations were not expected to be the same. The data in Table 9 confirms that the HL and LH groups contained scores which were less reliably related to the alternative measure of arousal.

Lastly, it was decided that if an alternate means of classification categorized people in a manner similar to the initial classification, then this would add validity to the original classification. In the new classification system, which will be referred to as classification 2, the score on each item for each respondent was classified in the same manner as were the total scores in the original classification (classification 1). In other words, the anger median for item 1 was obtained and the sum of the fear median and sadness median for item 1. And item 1 of person X was classified into one of the four groups, HH, HL, LH, or LL, dependent on whether the score of person X was above or below the medians for anger and fear plus sadness. All 18 items of person X were similarly classified and the total number of items classified in each of the four groups was obtained. Then the general classification for person X was the group in which he had the most items. For example, if person X had 7 items in the HH group, 3 in the HL, 3 in LH, and 5 in LL, he would obtain an overall classification of HH.

As the data in Table 10 indicates, the alternate classification agreed substantially with the original classification for the HH and LL groups but not for the HL and LH groups. All of these pieces of information indicated that, while the individual scales are reliably measuring their respective emotions, a two-dimensional classification

Table 9

Correlations between MAS and TFeSa

Group	N	Correlations
HH & LL	99	.25*
HL & LH	42	-.20
Total	141	.16

* $p < .05$

Table 10

Comparison of Classification 2 with

the Original Classification

Groups	Number of Respondents		
	Classified the same in Classification 2 as in Classification 1	Classified differently in Classification 2 than in Classification 1	Total
HH	51	1	52
HL	10	11	21
LH	8	13	21
LL	44	4	48
Total	113	29	142

system could not be applied reliably with the score data from this instrument alone.

CHAPTER IV

DISCUSSION

The purpose of this study was to develop a test that would reliably differentiate people and would test some of the implications of the theory of emotions of Schachter and the theory of aggression of Berkowitz. The results indicated that the test was psychometrically good, i.e., it reliably differentiated people. The questionnaire did reliably measure emotional reaction, but it did not reliably distinguish among the emotions. In other words, respondents could distinguish among the different situations on an arousal dimension, but they did not distinguish among the various emotions.

In regards to Schachter's theory, a minimal conclusion from the above data is that for the type of respondents in this study (to be discussed below), the labeling process is not as important as arousal in determining a person's reaction pattern. There were two aspects of Schachter and Singer's (1962) original research that precluded the possibility that they would arrive at a similar conclusion. First, Schachter tested for only one emotion. It was impossible for him to find this unspecific emotional pattern. Second, his real situational cues were very specific to one emotion and unambiguous. However, it seems that in real life these specific situational cues are the exception. It seems more likely that real life situations contain cues for more than one emotion and/or that the cues are more

ambiguous than those used by Schachter. This data does not invalidate Schachter's two process theory. This data does seem to indicate that for these particular respondents of a self-report questionnaire, their particular emotional reaction pattern can be adequately characterized by the arousal dimension alone. This does not preclude the possibility that the labeling process can be learned. However, many introspective tests of emotional states assume that people are capable of distinguishing between different emotional states and that people are able to accurately report these differences (Spielberger, Lustene, & McAdoo, 1971). At the least, this research did not support this assumption.

It should be noted that the above comments are presented with reference only to the type of respondent who answered the questionnaire. The situations were written with the college student in mind. The results are probably applicable to middle-class adults because 42% of the sample contained this type of respondent. There are other groups of people who have experienced different levels of emotional arousal in their everyday life than the group of respondents used in this sample. It would be expected that people who generally experience more arousal in their lives than the respondents in this sample, would indicate less arousal for the situations in the questionnaire.[2]

The construct validity of the Life Events Questionnaire is very dependent on its interaction with a theoretical perspective. The questionnaire was developed based on Schachter's theoretical perspective. The results were only partially supportive of Schachter's theory. The data have led to an amplification of this theory. If this amplification holds up under further research, this will add

validity not only to the amplified theory but also to the questionnaire. It can be easily seen that establishing construct validity is a continuing process. The present study has completed the first phase of establishing construct validity for the questionnaire, especially the anger scale. The present study contained no provision for tests of criterion validity. What is yet required is a test of whether it correlates with aggressive behavior. A second approach would be to see if the scores on the test would be affected by treatments designed to increase arousal.

The eventual goal of this line of research is to develop strategies for the management of aggression. The expected goal of this study was to be able to isolate those people who label their arousal as anger. However, the respondents in this sample did not differentiate their emotional reaction so that the expected goal was not achieved. But it is still possible that teaching people to label their arousal could reduce their aggressive potential. The questionnaire could then be used to determine whether training has enabled a person to differentiate among the emotions. The Life Events Questionnaire could also be used to identify those people who have high recognized arousal, i.e., those people who score high on all the scales; and treatment would be directed at reducing their arousal which is likely to reduce aggression potential.

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FOOTNOTES

1. The numbers in parenthesis indicate those items in the final draft that were written with that particular cause of anger in mind as a possible cue for a person to identify his arousal as anger.

2. Two students answered the questionnaire on March 2, 1973. The administrator gave them some introductory comments, but he was not present when they read the directions or answered the questionnaires. They were given a written copy of the instructions that were given verbally to the other groups.

3. TAN = 83.03 - 8.58 (Fstbrn)* - 2.21 (Sex) + .82 (RS) + .78 (SES) - .22 (Age)*

* (p .05)

4. The questionnaire was also given to high school students from lower socioeconomic homes and from a community noted for vandalism, violence, and gang activities. The discrimination among these students was very poor. This could have been an age related effect, due to an inability to adequately understand directions, or due to a high adaption level. The last hypothesis has been evaluated as being the most plausible.

APPENDIX A

APPENDIX A

The questionnaire and scales are presented below as they were used in the study. The RS and MAS were included under one title, Research Questionnaire. Filler items were deleted and duplicate items were omitted. The RS scale utilizes items 1 through 127. The MAS includes items 2, 11, 16, 17, 29, 39, 43, 48, 58, 61, 62, 67, 68, 71, 72, 73, 83, 89, 90, 92, 93, 100, 108, 120, and 128 through 147.

LIFE EVENTS

This questionnaire is concerned with your reactions to different situations. There are no right or wrong answers.

For each of the items below, you are to do your best to imagine yourself as the person involved in the situation and then to describe what your potential reaction would be in terms of the different emotional responses. Specifically, you are to circle one of the numbers which indicate the degree of intensity for each of the emotions under each item. Therefore, there should be five circles under each item. Take your time and rate each emotion independently.

1. Your wife has just told you that she is going tomorrow to stay with her mother for a couple of days. In this situation you would feel...

Anger:	1	2	3	4	5	6	7
	No Anger		Slight Anger		Much Anger		Rage
Fear:	1	2	3	4	5	6	7
	No Fear		Slight Fear		Much Fear		Terror
Sadness:	1	2	3	4	5	6	7
	No Sadness		Slight Sadness		Much Sadness		Grief
Disgust:	1	2	3	4	5	6	7
	No Disgust		Slight Disgust		Much Disgust		Loathing
Surprise:	1	2	3	4	5	6	7
	No Surpr.		Slight Surpr.		Much Surpr.		Shock

2. Your father has told you that he will help you through the first year of college only if you go to the college of his choice. In this situation you would feel...

Anger:	1	2	3	4	5	6	7
	No Anger		Slight Anger		Much Anger		Rage
Fear:	1	2	3	4	5	6	7
	No Fear		Slight Fear		Much Fear		Terror
Sadness:	1	2	3	4	5	6	7
	No Sadness		Slight Sadness		Much Sadness		Grief
Disgust:	1	2	3	4	5	6	7
	No Disgust		Slight Disgust		Much Disgust		Loathing
Surprise:	1	2	3	4	5	6	7
	No Surpr.		Slight Surpr.		Much Surpr.		Shock

3. Your college roommate took $15 of your money to buy a radio for your room without discussing it in advance. In this situation you would feel...

Anger:	1	2	3	4	5	6	7
	No Anger		Slight Anger		Much Anger		Rage
Fear:	1	2	3	4	5	6	7
	No Fear		Slight Fear		Much Fear		Terror
Sadness:	1	2	3	4	5	6	7
	No Sadness		Slight Sadness		Much Sadness		Grief
Disgust:	1	2	3	4	5	6	7
	No Disgust		Slight Disgust		Much Disgust		Loathing
Surprise:	1	2	3	4	5	6	7
	No. Surpr.		Slight Surpr.		Much Surpr.		Shock

4. You are driving in heavy traffic. You are going about 35 MPH and you are two car lengths behind the car in front of you. A car in the left lane pulls in front of you and quickly applies his brakes. In this situation you would feel...

Anger:	1	2	3	4	5	6	7
	No Anger		Slight Anger		Much Anger		Rage
Fear:	1	2	3	4	5	6	7
	No Fear		Slight Fear		Much Fear		Terror
Sadness:	1	2	3	4	5	6	7
	No Sadness		Slight Sadness		Much Sadness		Grief
Disgust:	1	2	3	4	5	6	7
	No Disgust		Slight Disgust		Much Disgust		Loathing
Surprise:	1	2	3	4	5	6	7
	No. Surpr.		Slight Surpr.		Much Surpr.		Shock

5. Your father is telling your younger brother that if he continues to hang around with his "hairy" friends, he won't get the use of the car. In this situation you would feel...

Anger:	1	2	3	4	5	6	7
	No Anger		Slight Anger		Much Anger		Rage
Fear:	1	2	3	4	5	6	7
	No Fear		Slight Fear		Much Fear		Terror
Sadness:	1	2	3	4	5	6	7
	No Sadness		Slight Sadness		Much Sadness		Grief
Disgust:	1	2	3	4	5	6	7
	No Disgust		Slight Disgust		Much Disgust		Loathing
Surprise:	1	2	3	4	5	6	7
	No Surpr.		Slight Surpr.		Much Surpr.		Shock

6. You are talking to a friend and she tells you that your steady boy friend has invited her to a dance while you will be out of town. In this situation you would feel...

Anger:	1	2	3	4	5	6	7
	No Anger		Slight Anger		Much Anger		Rage
Fear:	1	2	3	4	5	6	7
	No Fear		Slight Fear		Much Fear		Terror
Sadness:	1	2	3	4	5	6	7
	No Sadness		Slight Sadness		Much Sadness		Grief
Disgust:	1	2	3	4	5	6	7
	No Disgust		Slight Disgust		Much Disgust		Loathing
Surprise:	1	2	3	4	5	6	7
	No Surpr.		Slight Surpr.		Much Surpr.		Shock

7. Your boss at work has reassigned you to a position involving very menial work in the department. In this situation you would feel...

Anger:	1	2	3	4	5	6	7
	No Anger		Slight Anger		Much Anger		Rage
Fear:	1	2	3	4	5	6	7
	No Fear		Slight Fear		Much Fear		Terror
Sadness:	1	2	3	4	5	6	7
	No Sadness		Slight Sadness		Much Sadness		Grief
Disgust:	1	2	3	4	5	6	7
	No Disgust		Slight Disgust		Much Disgust		Loathing
Surprise:	1	2	3	4	5	6	7
	No Surpr.		Slight Surpr.		Much Surpr.		Shock

8. You are with your sister in a hospital while she is being routinely checked over after a minor automobile accident in which you were at fault. She is extremely upset with you and has stated that you ought to have your license revoked. In this situation you would feel...

Anger:	1	2	3	4	5	6	7
	No Anger		Slight Anger		Much Anger		Rage
Fear:	1	2	3	4	5	6	7
	No Fear		Slight Fear		Much Fear		Terror
Sadness:	1	2	3	4	5	6	7
	No Sadness		Slight Sadness		Much Sadness		Grief
Disgust:	1	2	3	4	5	6	7
	No Disgust		Slight Disgust		Much Disgust		Loathing
Surprise:	1	2	3	4	5	6	7
	No Surpr.		Slight Surpr.		Much Surpr.		Shock

9. Your father has just been passed up for a promotion that he expected to get. In this situation you would feel...

Anger:	1	2	3	4	5	6	7
	No Anger		Slight Anger		Much Anger		Rage
Fear:	1	2	3	4	5	6	7
	No Fear		Slight Fear		Much Fear		Terror
Sadness:	1	2	3	4	5	6	7
	No Sadness		Slight Sadness		Much Sadness		Grief
Disgust:	1	2	3	4	5	6	7
	No Disgust		Slight Disgust		Much Disgust		Loathing
Surprise:	1	2	3	4	5	6	7
	No Surpr.		Slight Surpr.		Much Surpr.		Shock

10. You are in a close game in a local bridge tournament. Your partner has made an obvious blunder because she was talking to a friend. In this situation you would feel...

Anger:	1	2	3	4	5	6	7
	No Anger		Slight Anger		Much Anger		Rage
Fear:	1	2	3	4	5	6	7
	No Fear		Slight Fear		Much Fear		Terror
Sadness:	1	2	3	4	5	6	7
	No Sadness		Slight Sadness		Much Sadness		Grief
Disgust:	1	2	3	4	5	6	7
	No Disgust		Slight Disgust		Much Disguat		Loathing
Surprise:	1	2	3	4	5	6	7
	No Surpr.		Slight Surpr.		Much Surpr.		Shock

11. Your brother and sister picked out a nice gift for your parents and have just told you how much you should contribute. In this situation you would feel...

Anger:	1	2	3	4	5	6	7
	No Anger		Slight Anger		Much Anger		Rage
Fear:	1	2	3	4	5	6	7
	No Fear		Slight Fear		Much Fear		Terror
Sadness:	1	2	3	4	5	6	7
	No Sadness		Slight Sadness		Much Sadness		Grief
Disgust:	1	2	3	4	5	6	7
	No Disgust		Slight Disgust		Much Disgust		Loathing
Surprise:	1	2	3	4	5	6	7
	No Surpr.		Slight Surpr.		Much Surpr.		Shock

12. You are walking down a street and half a block in front of you a car coming towards you down the street swerves over toward a curb on your side of the street, runs through a puddle, and splashes a nicely dressed woman standing on the sidewalk in front of you. In this situation you would feel...

Anger:	1	2	3	4	5	6	7
	No Anger		Slight Anger		Much Anger		Rage
Fear:	1	2	3	4	5	6	7
	No Fear		Slight Fear		Much Fear		Terror
Sadness:	1	2	3	4	5	6	7
	No Sadness		Slight Sadness		Much Sadness		Grief
Disgust:	1	2	3	4	5	6	7
	No Disgust		Slight Disgust		Much Disgust		Loathing
Surprise:	1	2	3	4	5	6	7
	No Surpr.		Slight Surpr.		Much Surpr.		Shock

13. During a visit to your home, your mother tells you that you should spend much more time with the family. In this situation you would feel...

Anger:	1	2	3	4	5	6	7
	No Anger		Slight Anger		Much Anger		Rage
Fear:	1	2	3	4	5	6	7
	No Fear		Slight Fear		Much Fear		Terror
Sadness:	1	2	3	4	5	6	7
	No Sadness		Slight Sadness		Much Sadness		Grief
Disgust:	1	2	3	4	5	6	7
	No Disgust		Slight Disgust		Much Disgust		Loathing
Surprise:	1	2	3	4	5	6	7
	No Surpr.		Slight Surpr.		Much Surpr.		Shock

14. A policeman is giving you a ticket for speeding in a school zone at a time when children are not in school. In this situation you would feel...

Anger:	1	2	3	4	5	6	7
	No Anger		Slight Anger		Much Anger		Rage
Fear:	1	2	3	4	5	6	7
	No Fear		Slight Fear		Much Fear		Terror
Sadness:	1	2	3	4	5	6	7
	No Sadness		Slight Sadness		Much Sadness		Grief
Disgust:	1	2	3	4	5	6	7
	No Disgust		Slight Disgust		Much Disgust		Loathing
Surprise:	1	2	3	4	5	6	7
	No Surpr.		Slight Surpr.		Much Surpr.		Shock

15. You are the host at a small party of friends. Across the room you hear a loud noise and realize that your brother has drunk too much and knocked over your wife's favorite vase which is standing next to her expensive lamp. In this situation you would feel...

Anger:	1	2	3	4	5	6	7
	No Anger		Slight Anger		Much Anger		Rage
Fear:	1	2	3	4	5	6	7
	No Fear		Slight Fear		Much Fear		Terror
Sadness:	1	2	3	4	5	6	7
	No Sadness		Slight Sadness		Much Sadness		Grief
Disgust:	1	2	3	4	5	6	7
	No Disgust		Slight Disgust		Much Disgust		Loathing
Surprise:	1	2	3	4	5	6	7
	No Surpr.		Slight Surpr.		Much Surpr.		Shock

16. You have been standing in a ticket line for twenty minutes. You are half way up the line and your bus leaves in fifteen minutes. A woman runs up to the front of the line and tells the ticket agent she needs a ticket immediately because her bus is ready to leave. In this situation you would feel...

Anger:	1	2	3	4	5	6	7
	No Anger		Slight Anger		Much Anger		Rage
Fear:	1	2	3	4	5	6	7
	No Fear		Slight Fear		Much Fear		Terror
Sadness:	1	2	3	4	5	6	7
	No Sadness		Slight Sadness		Much Sadness		Grief
Disgust:	1	2	3	4	5	6	7
	No Disgust		Slight Disgust		Much Disgust		Loathing
Surprise:	1	2	3	4	5	6	7
	No Surpr.		Slight Surpr.		Much Surpr.		Shock

17. Your husband is talking to your friend and ridiculing a belief which he knows is important to her. In this situation you would feel...

Anger:	1	2	3	4	5	6	7
	No Anger		Slight Anger		Much Anger		Rage
Fear:	1	2	3	4	5	6	7
	No Fear		Slight Fear		Much Fear		Terror
Sadness:	1	2	3	4	5	6	7
	No Sadness		Slight Sadness		Much Sadness		Grief
Disgust:	1	2	3	4	5	6	7
	No Disgust		Slight Disgust		Much Disgust		Loathing
Surprise:	1	2	3	4	5	6	7
	No Surpr.		Slight Surpr.		Much Surpr.		Shock

18. Your boss is in charge of a community service program, which is being closely watched by city officials. He is dependent on you and another employee, Bob. In the important stage of his main project, Bob tells your boss that he is quitting. In this situation you would feel...

Anger:	1	2	3	4	5	6	7
	No Anger		Slight Anger		Much Anger		Rage
Fear:	1	2	3	4	5	6	7
	No Fear		Slight Fear		Much Fear		Terror
Sadness:	1	2	3	4	5	6	7
	No Sadness		Slight Sadness		Much Sadness		Grief
Disgust:	1	2	3	4	5	6	7
	No Disgust		Slight Disgust		Much Disgust		Loathing
Surprise:	1	2	3	4	5	6	7
	No Surpr.		Slight Surpr.		Much Surpr.		Shock

APPENDIX B

APPENDIX B

Demographic information was also obtained from the respondents. For age, height, and weight, the values used were the same as that given by the respondents. For sex, males were scored 2 and females 1. For SES the respondents' descriptions were converted to a 1 through 7 scale with 7 being the value assigned to the upper class. The scale was based on the work of R. P. Coleman, Social class in Kansas City. Unpublished doctoral dissertation, University of Chicago, 1959. The personal views of height, weight, and muscularity were scored a 1 if an X was placed in the more muscular, heavier, or taller category and a score of 0 if an X was placed in the less muscular, lighter, or shorter category. And first-borns were scored 1 and later-borns were scored 0.

All the information in these ratings will be kept strictly confidential and used solely for the purposes of this experiment. The following personal information would be helpful.

Age: _____ Sex: _____ Height: _____ Weight: _____

If you are not a student, please indicate your occupation below. If you are a student, please indicate the occupation of your parents. If you are married, also indicate the occupation of your husband (or wife). Be as specific as you are able. For example, if you are a salesman, indicate what you sell.

Occupation:

(Self) _____

(Spouse) _____

(Father) _____

(Mother) _____

For each of the following items, place a check across from the description that best describes you at age 13 and today.

	At Age 13 I was ... (check one)	Today I am ... (check one)
more muscular than the average person of my sex.	_____	_____
less muscular than the average person of my sex.	_____	_____
heavier than the average person of my sex.	_____	_____
lighter than the average person of my sex.	_____	_____
taller than the average person of my sex.	_____	_____
shorter than the average person of my sex.	_____	_____

Please indicate the number of brother and sisters that you have _____.

Also, indicate your rank in the birth order (1 = oldest, 2 = second oldest, etc.) _____.

Thank you for your cooperation.

APPENDIX C

APPENDIX C

Directions for Mailed Material

SOME COMMENTS

1. In order to make the testing situation as uniform as possible, I ask you to do the following.

   a. Complete all the material in one setting and try to reduce distractions as much as possible.

   b. Answer the questionnaires (and have them in the mail) on or before February 27.

   c. Don't talk to another person about the questionnaires until you have completed them.

   d. Don't look at the questionnaires until you are ready to answer them.

2. After you have read the directions for the "Life Events" questionnaire, please read the following comment.

   Read each item carefully and take a short amount of time to place yourself in the situation described. Give yourself some time to "feel" the situation.

   In some of the situations, you are asked to take the role of a person of the opposite sex. For example, if you are a woman and the situation concerns a man, try to feel how a man would feel in that situation and indicate the emotion(s) that you would feel. For some of the situations, you may have to put yourself into other roles which you are not accustomed to. Although it may be difficult, try to imagine yourself in these roles.

3. If you have any questions about filling out the questionnaires, please call me at 637-8902.

4. After the data is tabulated, I will send you a description of what the questionnaire is measuring and the averages for the "Life Events" questionnaire provided I have your address.

5. Thank you for taking your time to answer these questionnaires. Your responses will be very helpful to me. I hope you find them interesting to read.

Thank you,

John Kremer

APPROVAL SHEET

The thesis submitted by John F. Kremer has been read and approved by the following Committee:

Dr. Marilynn B. Brewer, Director
Associate Professor, Psychology, University of California

Dr. Ronald E. Walker
Dean, College of Arts and Sciences, Loyola

The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the thesis is now given final approval by the Committee with reference to content and form.

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Arts.

5/16/74
Date

Ronald E. Walker for
Director's Signature

Marilynn B. Brewer